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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,095	02/27/2004	Timothy D. Sellis	18347 USA	7706
23307 7590 01/12/2007 SYNNESTVEDT & LECHNER, LLP 2600 ARAMARK TOWER 1101 MARKET STREET PHILADELPHIA, PA 191072950			EXAMINER MATZEK, MATTHEW D	
			ART UNIT	PAPER NUMBER
			1771	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/12/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/789,095.	<b>Applicant(s)</b> SELLIS ET AL.	
	<b>Examiner</b> Matthew D. Matzek	<b>Art Unit</b> 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 October 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-67 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

1. The amendment dated 10/19/2006 has been fully considered and entered into the Record. Claims 1-67 are currently pending and remain active. The previously applied double patenting rejection has been withdrawn as application 11/077,306 fails to claim a netting layer being biasable in at least one direction.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 9, 11, 14, 16-17, 19-20, 25-41, 43, 48, 50-51, 53-54, and 56-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gladfelter et al. (US 6,309,721) in view of Cook, II (US 2003/0012944).

a. Gladfelter et al. teach a flexible protective sleeve comprising an outer layer of a bi-laminate of a metal foil and a film of polyethylene terephthalate (PET) wherein the film has been flashed with aluminum (col. 4, lines 22-27). This outer layer anticipates the instantly claimed reflective layer with the PET layer being the flexible, resilient layer and the flashed layer of aluminum constitutes the metallized film layer. The metallized film layer may be adhesively attached to the foil layer (col. 4, lines 25-27). Under the outer layer comprising metal foil, aluminum metallized film, and layer of PET is support layer 11 which may be polyester or other heat settable polymeric materials (col. 4, line 53-55) and inner layer 12 which may be felt (col. 4, lines 27-29, Figure 1). The invention

of Gladfelter et al. is directed for use and a sleeving product with the foil layer facing outwardly and the felt (damping) layer. The invention is to be used as a tube with a hollow central core. Gladfelter et al. teach the concept of biasing a support layer in the disclosure pertaining to the serpentine monofilament 14. In particular, the reference teaches that the monofilament should provide sufficient rigidity to provide high hoop strength (circumferential) while at the same time provide a high degree of flexibility longitudinally (col. 1, lines 47-55). This demonstrates a biased support with greater rigidity in the circumferential direction relative to its longitudinal direction. The invention of Gladfelter et al. is silent as to the use of a netting layer to serve as support layer 11 and aluminum foil for the metal foil layer.

b. Cook, II teaches a reflective insulating material comprising outer layers of reflective foil, multiple layers of foam and a mesh material sandwiched between the layer of foam material all adhered together by adhesive (Abstract). The outer layer of foil is made of aluminum [0014]. A layer of adhesive has been placed between each layer to assist in maintaining the structural integrity of the article (Abstract).

c. Since Gladfelter et al. and Cook, II are from the same field of endeavor (i.e. reflective insulating materials) the purpose disclosed by Cook, II would have been recognized in the pertinent art of Gladfelter et al.

d. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the metal foil layer of Gladfelter et al. of aluminum foil and replaced the polymeric support layer for a mesh material. The skilled artisan would have been motivated by the desire to make use aluminum foil for its reflective

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properties and the use of a mesh layer for providing directional support to the protective sleeve. It would have also been obvious to have used the pressure sensitive adhesive of Gladfelter et al. (col. 4, lines 39-41) between each layers of the combined invention, as described by Cook, II and have said adhesive extend through the interstices of the netting layer. The artisan would have been motivated by the desire to impart greater structural integrity to the combined article via the application of PSA and by extending through the interstices the adhesive would be in contact with more surface area resulting in a stronger bond. Examiner equates the applied mesh layer to the instantly claimed netting layer. Support for this assertion has been provided by the *Textile Glossary*.

e. The orientational limitations set forth in claims 36-39 have been met by the illustrated embodiments of Figures 2, 2A and 2B.

3. Claims 8, 21, 42 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gladfelter et al. (US 6,309,721) in view of Cook, II (US 2003/0012944) as applied to claims 7, 20, 41 and 53 above, and further in view of Gladfelter et al. (US 5,849,379). The inventions of Gladfelter et al. ('721) and Cook, II are silent as to the thicknesses of the metal foil and felt layers.

a. The '379 patent teaches a split sleeve for insulation comprising an outer metal foil layer (Abstract) of 0.001 inches (col. 2, lines 62-65) and an inner layers of felt of about 2mm (0.079 in) (col. 2, lines 57-59).

b. Since the inventions of the '721 and '379 patents are from the same field of endeavor (i.e. insulative sleeves), the purpose disclosed in the '379 patent would have been recognized in the pertinent art of the '721 patent.

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- c. It would have been obvious at the invention was made to a person having ordinary skill in the art to modify the article of the '721 patent to have a foil layer of 0.001 inches and a felt layer of 0.079 inches. The skilled artisan would have been motivated by the desire to create an insulative article that is cost effective and possesses high durability (col. 1, lines 31-36).
- 4. Claims 18 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gladfelter et al. (US 6,309,721) in view of Cook, II (US 2003/0012944) as applied to claims 17 and 51 above, and further in view of Cohen et al. (US 2004/0126597). The inventions of Gladfelter et al. ('721) and Cook, II are silent as to the thicknesses of the adhesive layers.
  - a. Cohen et al. teach a material for covering insulation surfaces to protect them from environmental factors. The covering comprises multiple layers of foil with layers of pressure sensitive adhesive (PSA) disposed between said foil layers (Abstract). The PSA layers are typically 0.079 mm [0041].
  - b. Since Gladfelter et al. and Cohen et al. are from the same field of endeavor (i.e. covering for insulative articles), the purpose disclosed by Cohen et al. would have been recognized in the pertinent art of Gladfelter et al.
  - c. It would have been obvious at the time the invention was made to a person of ordinary skill in the art to have made the article of Gladfelter et al. with layers of PSA of 0.079mm. The skilled artisan would have been motivated by the desire to create an insulative article with improved structural integrity without making the article heavy or costly due to excessive use of PSA between the layers.

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5. Claims 12, 13, 22-24 and 45-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gladfelter et al. (US 6,309,721) in view of Cook, II (US 2003/0012944) as applied to claims 1 and 31 above, and further in view of Bunyan (US 6,410,137). The inventions of Gladfelter et al. ('721) and Cook, II are silent as to the orientation of the elongated members or their associated bending stiffness.

a. Bunyan teaches an electromagnetic shielding wrap comprising pressure sensitive adhesive (Abstract), metal foils and polyester meshes (col. 6, lines 18-56). Illustrated in Figure 3 is the polyester mesh of interlayer 18 that reinforces the foil member 12 for easier handling and cutting (col. 6, lines 51-60). The first and second elongated members of 18 are oriented at right angles to one another and the members that wrap around the body of the central core 52 are oriented perpendicular to an axis extending lengthwise along the central core.

b. Since Gladfelter et al. and Bunyan are from the same field of endeavor (i.e. insulative articles), the purpose disclosed by Bunyan would have been recognized in the pertinent art of Gladfelter et al.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the article of Gladfelter et al. with the polyester mesh of Bunyan. The skilled artisan would have been motivated by the desire to have imparted the article of Gladfelter et al. with tear resistance and reinforcement of the foil member for easier handling and cutting without deleteriously affecting the overall drapability of the article (col. 6, lines 57-62).

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- d. Claims 13 and 46 are rejected as it would have been obvious to have made the first members (width) of the reinforcing mesh with greater bending stiffness than the second elongated members (length). Gladfelter et al. teach the concept of biasing a support layer in the disclosure pertaining to the serpentine monofilament 14. In particular, the reference teaches that the monofilament should provide sufficient rigidity to provide high hoop strength (circumferential) while at the same time provide a high degree of flexibility longitudinally (col. 1, lines 47-55). This demonstrates a biased support with greater rigidity in the circumferential direction relative to its longitudinal direction. With regards to claims 13 and 46 the stiffer circumferential members serve as the first elongated members and the longitudinal members serve as the second elongated members.
6. Claims 15 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gladfelter et al. (US 6,309,721) in view of Cook, II (US 2003/0012944) as applied to claims 1 and 48 above, and further in view of Baccus et al. (US 2002/0127933). The inventions of Gladfelter et al. ('721) and Cook, II are silent as to the use of polypropylene in place of a polyester such as PET.

Gladfelter et al. discloses the claimed invention except that PET instead of polypropylene, Baccus et al. shows polypropylene is an equivalent structure known in the art. Therefore, because these two materials (polyester and polypropylene) may be used interchangeably as textile meshes in insulative articles and as such were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute polypropylene for polyester.



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7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gladfelter et al. (US 6,309,721) in view of Cook, II (US 2003/0012944) as applied to claim 9 above and further in view of Jones et al. (US 5,122,412). The disclosures of Gladfelter et al. and Cook, II are silent as to the thickness of the metallized film layer.

a. Jones et al. teach a metallized high specular gloss polyethylene plexifilamentary film-fibril sheet with very low emissivity created by coating the film-fibril sheet with a metallized layer. Such metallized sheets are useful as radiant barriers (Abstract). The metallized sheet reduces radiant heat transfer from a hotter exterior and reduces convective heat losses when a cooler environment surrounds the insulated article (col. 1, lines 44-48). A metallized layer thickness of between 75 and 300 Angstroms is desired (col. 4, lines 62-66).

b. Since Gladfelter et al. and Jones et al. are from the same field of endeavor (i.e., radiant barriers), the purpose disclosed by Jones et al. would have been recognized in the pertinent art of Gladfelter et al.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the metallized layer of Gladfelter et al. with a thickness of between 75 and 300 Angstroms as disclosed by Jones et al. The skilled artisan would have been motivated by the desire to create an article that is a radiant barrier with low emissivity, high moisture vapor permeability and good resistance to air and water penetration (col. 1, lines 14-19).

8. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gladfelter et al. (US 6,309,721) in view of Cook, II (US 2003/0012944) as applied to claim 43 above and further

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in view of Cohen (US 4,780,347). The disclosures of Gladfelter et al. and Cook, II are silent as to the thickness of the metallized film layer.

- a. Cohen teaches the creation of an insulation system for pipes (Abstract). The insulative system includes an interior metallized layer **18** of aluminum with a thickness of 0.00035 to 0.0007 inches (col. 3, lines 22-32).
- b. Since Gladfelter et al. and Cohen are from the same field of endeavor (i.e. insulative systems), the purpose disclosed by Cohen would have been recognized in the pertinent art of Gladfelter et al.
- c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the metallized film layer with a thickness of 0.00035 to 0.0007 inches with the motivation of providing the insulative system with a vapor barrier (col. 3, lines 15-20, Cohen).

***Response to Arguments***

9. Applicant's arguments filed 10/19/2006 have been fully considered but they are not persuasive.
10. Applicant argues that Examiner has improperly relied upon Cook's reference to teach a mesh material being biased or bias-able and has improperly relied on hindsight for the rejection of the independent claims. Examiner has not relied upon Cook to teach the use of a biased net or mesh. Gladfelter et al. (US 6,309,721) has been relied upon for the teaching of a biased support for the flexible protective sleeve. Cook has been relied upon to replace the serpentine monofilament of Gladfelter with his teaching of a mesh support. Since Gladfelter et al. and

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Cook, II are from the same field of endeavor (i.e. reflective insulating materials) the purpose disclosed by Cook, II would have been recognized in the pertinent art of Gladfelter et al.

11. Applicant argues that if the '721 patent and Cook would be combined the core principle of providing a resilient set or bias to the protective sleeve would be destroyed. Examiner agrees that if the monofilament is replaced with an unbiased mesh the core principle of the '721 invention would be destroyed. However, the teaching of a biased support is set forth in the primary reference. Examiner has merely relied upon Cook to teach the use of a mesh rather than the use of a monofilament. Cook provides the motivation to replace the monofilament with the mesh as the applied invention is cheaper and easier to manufacture and provides sufficient structural integrity to form and maintain the desired configurations.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzek whose telephone number is (571) 272-2423. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mdm *MDM*

*Norca*  
Norca L. Torres-Velazquez  
Primary Examiner  
Art Unit 1771

1/5/07